Application No.:   10/659,237
Amendment Dated: June 8, 2007   MTS-3302US1
Reply to Office Action of: March 8, 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. - 5. (Cancelled)

6.   (Currently Amended) A vital signs processing apparatus comprising:

vital signs detecting means ~~of detecting~~configured to detect vital signs of a user, the vital sign detecting means comprising:

buffering means configured for temporarily storing said detected vital signs, and

first communicating means; and

vital signs processing means ~~of processing, storing, and displaying~~ configured to process, store, and display said vital signs detected by said vital signs detecting means, the vital signs processing means comprising:~~; wherein~~

~~said vital signs detecting means comprises at least:~~

~~buffering means of temporarily storing said detected vital signs; and~~

~~first communicating means of communicating with said vital signs processing means;~~

~~said vital signs processing means comprises at least:~~

second communicating means configured for~~of~~ communicating with said vital signs detecting means;

storing means ~~of~~ configured for storing detected said vital signs;

processing means ~~of~~ configured for processing said vital signs stored in said storing means according to a predetermined program and/or data; and

displaying means ~~of~~ configured for displaying said vital signs stored in said storing means and/or output data of said processing means~~,~~.

wherein said first communicating means is configured for communicating with said vital signs processing means, and

wherein said buffering means and said storing means comprise a removable medium which can be detached, and said removable medium is transferable between said vital signs detecting means and said vital signs processing means to transfer data stored in said removable medium.

7. (Currently Amended) The vital signs processing apparatus according to ~~Claim 6~~claim 6, wherein said vital signs processing means further comprises third communicating means ~~of~~ configured for communicating with an external server.

8. (Currently Amended) The vital signs processing apparatus according to ~~Claim 6~~claim 54 or 55, wherein:

said buffering means and said storing means comprise a removable medium which can be detached; and

said removable medium is ~~transferred~~ transferable between said vital signs detecting means and said vital signs processing means, whereby the data stored in said removable medium is transferred.

9. (Currently Amended) The vital signs processing apparatus according to any of ~~Claims 6-8~~claims 6, 54 or 55, wherein:

said vital signs detecting means ~~is composed of~~ comprises a pulse wave sensor for measuring ~~the~~ a pulse wave of ~~a user~~the user; and

said processing means comprises:

frequency processing means of performing FFT (fast Fourier transformation) processing onto ~~the frequency of~~ said pulse wave to generate an output;

heart rate measuring means of measuring a heart rate of the user from the output of said frequency processing means; and

calorie consumption calculating means of calculating calorie consumption of the user from said heart rate.

10. (Currently Amended) The vital signs processing apparatus according to ~~Claim 9~~claim 9, wherein:

said vital signs processing means further comprises FFT processing means of performing FFT processing onto said heart rate;

according to ~~the~~ a result of said FFT processing, it is determined whether said user is exercising or not; and

when it is determined that said user is not exercising, and when said heart rate exceeds a predetermined set value, said calorie consumption calculating means does not use said measured heart rate, but calculates calorie consumption according to said user's resting heart rate stored previously.

11.   (Currently Amended) The vital signs processing apparatus according to claim 9, further comprising inputting means ~~of permitting~~ configured to permit a user to input: personal data including one's name, age, and sex; the health control indices ~~including~~ as daily, weekly, monthly, and final target values for calorie consumption; and ~~exercise indices including~~ upper and lower limits for heart rate at exercise, and exercise time.

12.   (Currently Amended)   The vital signs processing apparatus according to ~~Claim 11~~ claim 11, wherein said health control indices and said exercise indices are displayed on said displaying means.

13.   (Currently Amended) The vital signs processing apparatus according to ~~Claim 9~~ claim 9, further ~~comprising~~ comprising:

        inputting means configured to accept inputted upper and lower limits of a safe heart rate; and

        notifying means ~~of warning~~ configured to warn said measured user when said heart rate falls outside ~~the~~ a range between said upper and lower limits for the safe heart rate ~~having been input through said inputting means~~.

14.   (Currently Amended)   The vital signs processing apparatus according to ~~Claim 11~~ claim 11, wherein:

        said processing means performs: ~~the~~ accumulation of said calorie consumption to provide an accumulated value of calorie consumption; ~~the~~ calculation of ~~the~~ a difference of the accumulated calorie consumption from ~~said~~ a target value; ~~the~~ calculation of ~~the~~ a degree of achievement to said target value; and ~~the~~ calculation of ~~the~~ an expected time of achieving said target value at ~~the~~ a current pace of calorie consumption; and then stores these data in a region different from that of said vital signs data, within said storing means; and

said displaying means displays: ~~the~~ a time series of ~~the~~ a change in said <u>measured</u> heart rate and said calorie consumption; ~~said~~ accumulated value of calorie consumption; and

said expected time of achieving said target value.

15. - 27.   (Cancelled)

28.   (Currently Amended)   A <u>computer readable medium including a program</u> ~~of~~<u>for</u> operating a computer as ~~all or part of~~ said processing means of said vital signs processing means of said vital signs processing apparatus according to ~~Claim 6~~<u>any of claims 6, 54 or 55</u>.

29. - 51.   (Cancelled)

52.   (Currently Amended)   The vital signs processing apparatus of ~~claim 7~~<u>claim 55</u>, wherein the server ~~includes~~<u>is further configured to</u>:

<u>determine whether the detected vital signs, received from the vital signs processing means via the third communicating means, are within a predetermined range for the user;</u>

<u>change the health control program; and</u>

<u>transfer the changed program to the vital signs processing means via the third communicating means, when the detected vital signs are determined to be outside of the predetermined range for the user</u>~~ means determining whether the detected vital signs, received from the vital signs processing means via the third communicating means, are within a predetermined range for a user, and~~

~~changing the predetermined program and/or data, and transferring the changed program and/or data to the vital signs processing means via the third communicating~~

~~means, when the detected vital signs are determine to be outside of the predetermined~~

~~range for the user.~~

53.   (Cancelled)

54.   (New) A vital signs processing apparatus comprising:

vital signs detecting means configured to detect vital signs of a user, the vital sign detecting means comprising:

buffering means configured for temporarily storing said detected vital signs, and

first communicating means; and

vital signs processing means configured to process, store, and display said vital signs detected by said vital signs detecting means, the vital signs processing means comprising:

second communicating means configured for communicating with said vital signs detecting means;

storing means configured for storing said detected vital signs;

processing means configured for processing said vital signs stored in said storing means according to a predetermined program and/or data;

third communicating means configured for communicating with an external server; and

displaying means configured for displaying said vital signs stored in said storing means and/or output data of said processing means,

wherein said first communicating means is configured for communicating with said vital signs processing means, and

wherein the external server includes:

means configured for determining whether the detected vital signs, received from the vital signs processing means via the third communicating means, are within a predetermined range for the user,

means configured for changing the predetermined program and/or data and transferring the changed program and/or data to the vital signs processing means via the third communicating means, when the detected vital signs are determined to be outside of the predetermined range for the user.

55.   (New) A vital signs processing apparatus comprising:

vital signs detecting means configured to detect vital signs of a user, the vital sign detecting means comprising:

buffering means configured for temporarily storing said detected vital signs, and

first communicating means; and

vital signs processing means configured to process, store, and display said vital signs detected by said vital signs detecting means, the vital signs processing means comprising:

second communicating means configured for communicating with said vital signs detecting means;

storing means configured for storing said detected vital signs;

processing means configured for processing said vital signs stored in said storing means according to a predetermined program and/or data;

third communicating means configured for communicating with an external server; and

displaying means configured for displaying said vital signs stored in said storing means and/or output data of said processing means,

wherein said first communicating means is configured for communicating with said vital signs processing means, and

wherein the server is configured to:

generate a health control program comprising exercise indices, an exercise menu, and health control indices, the exercise indices directing an exercise routine of the user, and

transmit the health control program to the vital signs processing means.

56.   (New) The vital signs processing apparatus according to claim 55, wherein the server includes a user chart comprising stored vital signs of the user, the stored vital signs comprising height, weight, body fat percentage, and temperature of the user, the server being further configured to generate the health control program using the user chart.

57.   (New) The vital signs processing apparatus according to claim 56, wherein the health control indices specify target values for a health of the user.

58.   (New) The vital signs processing apparatus of claim 56, wherein:

the vital signs detecting means is further configured to receive further vital signs from the user exercising according to the predetermined program and/or data;

the vital signs processing means is further configured to transmit the further vital signs to the server via the third communication means; and

the server is further configured to modify the health control program according to the further vital signs received from the vital signs processing apparatus.

59.   (New)   The vital signs processing apparatus of claim 56, wherein the vital signs processing means is further configured to transmit warning information for requesting attention to said server via the third communication means when the detected vital signs fall outside a range of values set in the health control program.

60.   (New)   A method of controlling a health of a user of a vital signs processing apparatus comprising a vital signs detecting means configured to detect vital signs of the user and a vital sign processing means configured to process, store, and display the vital signs detected by the vital signs detecting means, the method comprising:

generating a health control program in a server according to a user chart containing vital signs including height, weight, body fat percentage, and temperature of said user, the health control program including all or part of exercise indices, an exercise menu, and health control indices of the user of the vital signs processing apparatus, the server being external to the vital signs processing apparatus;

transmitting the health control program to the vital signs processing apparatus;

receiving the health control program in the vital signs processing apparatus;

measuring vital signs of the user exercising according to instructions in the health control program,

wherein the health control program directs an exercise routine of the user.

61.   (New) The method according to claim 60 further comprising:

transmitting the measured vital signs to the server;

modifying the health control program depending on the transmitted vital signs; and

transmitting the modified health control program to the vital signs processing apparatus.

62.   (New) The method according to claim 60 further comprising:

determining, in the vital signs processing apparatus, whether the measured vital signs fall outside a range of values set in the health control program; and

transmitting warning information from the vital signs processing apparatus to the server requesting attention from the server.

63.   (New) The method according to claim 62 further comprising:

altering the exercise indices and/or the exercise menu in the health control program according to the warning information to provide a modified health control program; and

transmitting the altered exercise indices and/or exercise menu to the vital signs processing apparatus to provide the vital signs processing apparatus with the modified health control program.

64.   (New) The method according to claim 61 further comprising:

measuring further vital signs of the user exercising according to instructions in the modified health control program.

65.   (New) The method according to claim 60 further comprising:

providing prompt information for requesting renewal of measured vital signs to the user;

measuring new vital signs of the user; and

transmitting the new measured vital signs to the server.

66.   (New) The method according to claim 65, wherein said prompt information is output when the measured vital signs are not renewed for a predetermined time or longer.

67.   (New) The method according to claim 65, wherein the prompt information includes a method of operation of the vital signs processing apparatus for the user to renew the measured vital signs.

68.   (New) The health control method according to claim 65, wherein the prompt information includes a method of operation of the server for the user of the vital sign processing apparatus.

69.   (New) The health control method according to claim 60 wherein:

the server further comprises a user ID (identifier) table for storing user identifications for corresponding a user chart of each user to that user uniquely; and

each user identification is transmitted together with the health control program to the vital signs processing apparatus.

70.   (New) A computer readable tangible medium including a program for operating a central processing unit of a computer to perform all of the steps of generating and transmitting in the method of claim 60.

71.   (New) A data structure on a computer readable tangible medium including instructions for operating a central processing unit of a computer to perform all of the second steps of generating and transmitting in the method of claim 60.